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- Production Costs per Ton of Coal

Elements Included in Production Costs of One Ton of Coal	For 7 Months of 1953			For July 1953	
	Percent of Total Production Costs	Production Cost in Percent of Plan	Percent of Total Excess Production Costs	Production Costs in Percent of Plan	Percent Re- duction in Costs Over January 1953
Materials	20.2	111.7	2.3	97.5	16.6
Fuel	1.9	178.6	1.4	66.7	92.2
Electric power	4.2	162.9	2.5	98.0	34.8
Wages	54.1	113.2	7.0	106.5	3.7
Additions to wages	4.9	118.8	0.7	109.6	3.7
Amortization	9.7	106.2	0.5	106.3	29.3
Other expenditures	5.0	146.9	2.2	121.0	20.4
Production costs	100.0	115.6	15.6	104.6	15.4

Materials

Materials account for 20.2 percent of the production costs, being second to wages only. Mine timbers make up 70 percent of the costs of materials. During 7 months of 1953 outlay for materials was reduced 16.6 percent, including mine timbers 9.2 percent and other materials 36.9 percent. In July expenditures for materials were 2.5 percent below the plan, including an excessive outlay of 3.6 percent for mine timbers and a saving of 21.5 percent for other materials.

Fuel

This element in the production costs is the fuel consumed by the mine for production needs. Excess fuel consumption was allowed by the mine only in the first quarter and mainly for the boiler installations.

Electric Power

Expenditures for electric power account for 4.2 percent of all production expenditures. The excess consumption of electric power by Mine No 9 during 7 months of 1953 was mainly the result of production defects, i.e., incorrect selection of motor and transformer capacity with a resulting underload, the considerable distance of transformers from the work place, and the incorrect contour and faulty condition of mine roads. Losses of electric power for the indicated reasons amounted to no less than 30 percent. In July 1953 a considerable increase in coal output was accompanied by a 2-percent reduction in electric power consumption as a result of the more complete utilization of conveyor installations at the faces, concentrated extraction of coal at the faces during one shift, uniform loading of the compressors during the day, improvement of the condition of mine roads, and a greater load for electric locomotives.

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Wages

During 7 months of 1953, mine expenditures for one day's pay were 13.2 percent above the plan. It is true that these expenditures were 3.7 percent less in July than in January but they still exceeded planned figures by 6.5 percent. Wages, together with the additions to them, made up about 60 percent of the production costs of coal. Such a high figure is the result of low labor productivity and laboriousness of coal extraction in the mine (570 man-shifts per thousand tons of coal).

Mine No 9 was put into operation in July 1952. Its planned capacity has been achieved only 60 percent although its technical equipment is such as to assure not only the achievement but the exceeding of this capacity. Its slow rate in reaching this goal is largely the result of the inadequate development of the working front for mining operations. The mine was to have four double faces but actually has only two with a total length of 210 meters. In reaching its planned capacity, the mine will be able to decrease production costs by lowering fixed expenditures 10 percent.

At present, the organization of work at active faces which have approximately uniform mining and geological conditions, similar equipment with mechanisms, and an approximately uniform supply of workers differs from one face to another. Faces No 51-53 completed 30.4 cycles in July, faces 47-49 only 21.9.

In section No 1 of faces No 51-53, the seam is 1.75 meters thick and the faces 97 meters long. The coal is cut with a KMP-1 cutting machine with a cutting bar 2 meters long and is broken up by pneumatic drills. Loading at the face is by manual labor. Completing 30.4 cycles in July, section No 1 achieved a monthly advance of the faces of 60.8 meters, a labor productivity per worker per section per shift of 5.1 tons, a productivity of the cutting and loading personnel of 12 tons, and a monthly productivity of the cutting machine of 6,300 tons of coal.

Faces No 47-49 of section 2 completed only 21.9 cycles during the month as a result of long shutdowns caused mainly by breakdowns of mechanisms and other defects in work organization.

Faces No 51-53 exceeded faces No 47-49 in the advance of the faces more than 38.5 percent, in labor productivity per worker per section 21.2 percent, in productivity of the cutting and loading personnel 27.1 percent, and in reducing production costs of coal 5.5 percent.

Pneumatic drills are utilized for breaking up coal at development work fronts. The haulage of coal and rock to the main haulage passages and the delivery of timbers from the main haulage passages to the working front are carried out by manual labor. Lack of promptness in the delivery of timbers and empty cars is one of the reasons for cessation of activities.

To achieve the planned capacity of the mine, the volume of development work should be increased about 25 percent. This will be made possible largely by using a more perfected method of cutting, utilizing electric locomotives for hauling coal from the face and for delivering timbers to the face, and improving facilities for drying workings. Preliminary estimates indicate that the speed in completing workings will be increased 60 percent in this way and labor productivity will rise 30 percent.

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Amortization

Actual amortization figures exceeded planned figures 4.7 percent because of nonfulfillment of the plan for coal output and 1.5 percent because of incorrect computation.

Other Expenditures

Excesses in other expenditures were caused mainly by losses from maintenance of living quarters and unproductive expenditures such as the payment of penalties and fines.

BELORUSSIAN PEAT ENTERPRISE REDUCES COSTS -- Moscow, Torfyanaya Promyshlennost', No 2, Feb 54

In the Belorussian SSR the cost of peat fuel makes up half of all the expenses incurred by thermoelectric power stations in the generation of electric power, and the costs of peat fuel to the brick industry account for 20 percent of the total costs of brick. Consequently, the cheaper peat becomes, the greater will be the possibility of reducing the cost of products of electric power stations, brick plants, and many other industrial enterprises which consume peat.

During the postwar years enterprises of the Belgostorf Trust have reduced production costs of peat by mechanizing labor-consuming processes and radically improving the technology of production. From 1948 to 1952 the average cost of one ton of general-purpose peat was decreased more than 30 percent. Nevertheless, it continues to be high.

The outstanding experience of the peat enterprise imeni Ordzhonikidze of the Belgostorf Trust shows the possibility of reducing the production costs of peat. As indicated in the following table, workers of the enterprise have been regularly reducing the production costs of milled peat since 1951:

<u>Year</u>	<u>Production of Milled Peat (1,000 tons)</u>	<u>Reduction in Production Costs per Ton of Peat</u>	
		<u>Percent of Plan</u>	<u>Percent of 1951</u>
1951	133.6	99.7	100.0
1952	136.9	83.4	82.9
1953	177.6	84.9	68.9

Data on changes in the production costs of milled peat in this enterprise indicate a considerable decrease in expenditures per unit of production for all items except amortization. This is shown in the table below:

<u>Items of Expenditure</u>	<u>Production Costs per Ton of Milled Peat</u>	
	<u>1952 in Percent of 1951</u>	<u>1953 in Percent of 1951</u>
Fuel	92.5	96.2
Wages with additional payments	53.3	49.0
Including industrial workers	38.9	37.0

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CONFIDENTIALProduction Costs per Ton of Milled Peat

<u>Items of Expenditure</u>	<u>1952</u> <u>in Percent of 1951</u>	<u>1953</u> <u>in Percent of 1951</u>
Recruitment of workers	15.6	15.6
Labor protection	102.0	55.8
Amortization	116.2	129.8
Current repair	130.0	92.3
Maintenance of fields	93.5	61.8
Shop expenditures	72.3	62.7
Shop costs	84.4	70.6
General plant expenditures	78.0	62.0
Total general plant production cost	82.9	68.9

The general reduction in the production costs of milled peat was not by chance but can be explained to a considerable degree by the improvement in the basic technical and economic indexes of the work as is evident from the following table:

<u>Indexes</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1953 in Percent of 1951</u>
Peat output, 1,000 tons	155.9	150.4	191.0	122.5
Yield from one hectare in a cycle, tons	20.6	22.7	20.85	101.2
Season yield from one hectare, tons	541.8	608.9	704	129.9
Number of tractors for extracting, drying, and gathering, units	31	32	34	109.7
Level of mechanized gathering, percent	48.5	100.0	100.0	-
Number of UMPF-4 gathering machines, units	10	12	13	130.0
Productivity per machine-shift, tons	81.5	106.0	145.0	177.9
Season production per machine, tons	7,590	12,534	14,624	192.7

All gathering machines in the peat enterprise imeni Ordzhonikidze exceeded the 1953 season plan for peat gathering.

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A strict accounting of fuel was organized in the enterprise and fuel was issued only in accordance with approved norms. Operators of the milling drums and gathering machines saved 22,964 kilograms of fuel and 4,164 kilograms of lubricants during the season.

The enterprise has not exhausted its capacity for further reducing the production costs of peat. It incurs some unproductive expenses and losses of working time. During the 1953 peat season, the plan for the yield from one hectare during a cycle was not fulfilled and more than 30,000 rubles were paid out for various fines and penalties. About 5 percent of the working time was lost because of idle periods [of equipment].

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